8

CLAIMS:

1.   Split protocol transmission method for transmitting data and a communication thread identifier for said data along a communication path from a source functional unit (SFU) to a destination functional unit (DFU), wherein in the communication path a data consuming functional unit (CFU) and a data producing functional unit (PFU) directly communicate to each other by means of a handshake procedure wherein the data consuming functional unit (CFU) indicates a communication thread identifier (TID) to the data producing functional unit and the data producing functional unit provides data related to said communication thread identifier to said data consuming functional unit.

2.   Method according to claim 1, characterized in that the data producing functional unit (PFU) indicates (ACCEPTP) when it has accepted the communication thread identifier.

3.   Method according to claim 1, wherein the data producing functional unit (PFU) accepts the communication thread identifier within a fixed number of clock cycles.

4.   Method according to claim 1, wherein the data consuming functional unit (CFU) indicates (ACCEPTC) when it has accepted the data from the data producing functional unit (PFU).

5.   Method according to claim 1 wherein the data consuming functional unit (CFU) accepts the data from the data producing functional unit (PFU) within a fixed number of clock cycles.

6.   Method according to claim 2 wherein the data producing functional unit (PFU) provides information indicating whether one of the following situations exist,
-       the data consuming functional unit (CFU) has to continue indicating the communication thread identifier (TID),
-       the indicated communication thread identifier (TID) is accepted,

9

the second functional unit (CFU) is requested to indicate an other communication thread identifier.

7.   Method according to claim 1, characterized by a further handshake procedure wherein information is exchanged from the data producing functioning unit (PFU) to the data consuming functional unit (CFU) to exchange communication thread information, the further handshake procedure being independent of the handshake procedure defined in claim 1.

8.   The method according to claim 2, wherein the data producing functional unit (PFU) provides a thread acceptation signal (ACCEPTP) when it has accepted the indication for the communication thread (TID), and defers providing data until after it has provided the thread acceptation signal.

9.   Processing system comprising a plurality of functional units, the processing system being arranged to transmit data and a communication thread identifier for said data according to a split protocol along a communication path from a source functional unit (SFU) to a destination functional unit (DFU), a data consuming functional unit (CFU) and a data producing functional unit (PFU) in the communication path being arranged to directly communicate to each other by means of a handshake procedure, wherein the data consuming functional unit (CFU) indicates a communication thread identifier (TID) to the data producing functional unit and the data producing functional unit provides data related to said communication thread identifier to said data consuming functional unit.

10.   Processing system according to claim 9, wherein the data consuming functional unit is an application specific processor (ASP) capable of scheduling tasks based on incoming read data.

11.   Processing system according to claim 9, wherein the data consuming functional unit is a memory controller comprising a scheduler for providing indications of a communication thread identifier in an order which reduces memory access time.